

**REMARKS**

Claims 1, 3-5, 7, 9-11, 16, 19, and 21 are pending in the application. Claims 1, 4, 5, 9, 16, and 21 have been amended. Support for the amendments can be found in the original specification as filed. No new matter has been added.

**Rejections under 35 U.S.C. 112**

Claim 21 stands rejected under 35 U.S.C. §112 as being indefinite for failing to point out and distinctly claim the subject matter which Applicants regard as the invention. The Examiner alleges that Claim 21 depends from cancelled Claim 15. Applicants have attended to the Examiner's rejection by amending the dependency of Claim 21 to depend from Claim 11 and respectfully request withdrawal of the objection.

**Rejections under 35 U.S.C. 103(a)**

Claims 1, 3-5, 7, 9-11, 16, and 19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,700,648 to Hirooka et al (hereinafter "Hirooka").

It is well settled that to establish a *prima facie* case of obviousness, the USPTO must satisfy all of the following requirements. First, the prior art relied upon, coupled with the knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or to combine references. *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Second, the proposed modification does not have a reasonable expectation of success, as determined from the vantage point of one of ordinary skill in the art at the time the invention was made. *Amgen v. Chugai Pharmaceutical Co.* 18 USPQ 2d 1016, 1023 (Fed Cir, 1991), *cert. denied* 502 U.S. 856 (1991). Third, the prior art reference or combination of references must teach or suggest all of the limitations of the claims. *In re Wilson*, 165 USPQ 494, 496, (CCPA 1970).

The Examiner concedes that Hirooka fails to disclose the specific transition metal component or the radical producer of the Applicants' claimed invention but alleges that one of ordinary skill in the art would be motivated to use such species in the disclosed methods because they have been recommended.

The Applicants respectfully disagree. Hirooka fails to provide motivation to modify the disclosure of Hirooka to arrive at Applicants' transition metal compounds of amended independent Claims 1, 4, 5, 9, and 16. In particular, Hirooka fails to describe, teach or suggest a  $ML_2Q_b$  transition metal compound where L is a 2-, 3-, or 4- dentate chelatin ligand and Q is a mono-anionic or non-ionic ligand. The Examiner points to acetylacetonate complexes containing chromium, iron, cobalt, and nickel as being species described in amended independent Claims 1, 4, 5, 9 and 16. However, acetylacetonate is described in the Applicants' specification as 2- dentate chelatin species (L). Applicants submit that the species listed by the Examiner do not contain Q moieties, and consequently, Hirooka fails to recommend any transition metal containing compounds as recited in amended independent Claims 1, 4, 5, 9 and 16.

Furthermore, Hirooka clearly states that it is necessary that the transition metal containing compound (b) to be mixed with (a), an organo-metallic halide, and the group (B) monomer; "it is necessary that the components (a) and (b) should be mixed with each other in the presence of at least the group (B) monomer," (emphasis added, See col 4, ln 28 – 34). Amended independent Claims 1 and 4 describe a process that does not require this limitation, and necessarily, describe a different process from the one taught by Hirooka. Hirooka fails to describe, teach or suggest a process in which the transition metal containing compound is mixed with either monomer prior to copolymerization. Accordingly, Applicants respectfully request reconsideration and withdrawal of the Examiner's rejections under 35 USC 103 over Hirooka.

Claims 3, 7, 10, 11, 19, and 21, either directly or indirectly, depend from and add further limitation to and are in condition for allowance for at least the same reason in connection with amended independent Claims 1, 4, 5, 9 and 16. Reconsideration is respectfully requested.

Claims 5, 7, 9, 10, 16, and 19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,455,650 to Lipian et al (hereinafter "Lipian").

The Examiner alleges that Lipian discloses a method of polymerizing and copolymerizing cycloolefins using the transition metal complex and co-catalysts of the Applicants' invention. Therefore, the Examiner argues that one of ordinary skill in the art would be motivated to select the claimed components for the making of a polymerizable composition because Applicants have recommended a wide array of species within the claimed scope.

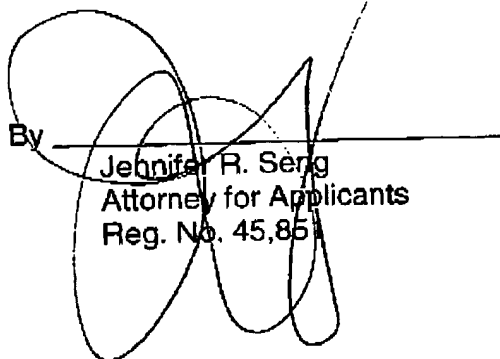
In contrast to amended independent Claims 5, 9, and 16 which are directed to compositions used for copolymerizing polar and non-polar monomers, Lipian describes a process for copolymerizing cycloolefins which are non-polar monomers. Lipian fails to provide disclosure, teaching or suggestions regarding polar cycloolefins, and therefore fails to describe, teach or suggest the copolymerization of polar and non-polar monomers as recited in amended independent Claims 5, 9, and 16. Moreover, one skilled in the art would not look to the teachings of Lipian to develop a transition metal compound for use in reactions in which polar and non-polar monomers are copolymerized.

Furthermore, Lipian fails to describe a transition metal component of the structure claimed in amended independent Claims 5, 9, and 16. In particular, the bidentate transition metal compounds of Lipian contain a group 15 neutral electron donor ligand (L') and labile neutral electron donor ligand (L'') and provides no motivation to remove either L' or L'' to arrive at the transition metal compounds of amended independent Claims 5, 9 and 16. Accordingly, Lipian fails to render obvious amended independent Claims 5, 9, and 16 and reconsideration of the rejections under 35 USC 103(a) is respectfully requested.

Claims 7, 10, and 19 either directly or indirectly depend from, add further limitation to and are in condition for allowance for at least the same reasons in connection with amended independent Claims 5, 9 and 16. Reconsideration is respectfully requested.

In view of the above amendments, Applicants submit that the claims are in condition for allowance and the Examiner would be justified in allowing them

Respectfully submitted,

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